Application Serial No.: 10/023,424

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

Amendments to the Claims:

Please add new claims 64-88.

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Previously Presented) A method for modifying an optical path of an optical medium, the

optical medium including a first layer adjacent a data layer comprising:

selecting a region of the first layer to be distorted; and

prior to a reading operation of the medium, distorting the region of the first layer

such that a reading operation of data stored in the data layer corresponding to the

distorted region is modified, the distorted region extending in a direction along a track of

the data layer, the distorted region maintaining its optical characteristics following

irradiation of the distorted region during the reading operation.

2. (Original) The method of claim 1 wherein the first layer comprises a reading layer

through which the optical path is directed.

3. (Previously Presented) The method of claim 2 wherein the optical medium further

comprises a back layer adjacent the data layer, opposite the reading layer.

4. (Original) The method of claim 3 wherein selecting a region and distorting the region are

further performed on the back layer.

5. (Original) The method of claim 1 wherein the first layer comprises a back layer.

6. (Original) The method of claim 5 wherein the optical medium further comprises a reading

layer adjacent the data layer, the reading layer opposite the back layer.

7. (Original) The method of claim 6 wherein selecting a region and distorting the region are

further performed on the reading layer.

- 2 -

Application Serial No.: 10/023,424

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

8. (Original) The method of claim 1 wherein selecting comprises selecting a predetermined

region of the first layer.

9. (Original) The method of claim 1 wherein selecting comprises selecting a random region

of the first layer.

10. (Original) The method of claim 1 wherein distorting comprises distorting the region of

the first layer such that the optical path of incident light in the distorted region for reading

the corresponding data in the data layer is modified.

11. (Original) The method of claim 1 wherein distorting comprises forming an indentation in

an outer surface of the first layer.

12. (Original) The method of claim 11 further comprising encapsulating the indentation.

13. (Original) The method of claim 12 wherein encapsulating comprises providing a second

layer on the first layer and the indentation.

14. (Original) The method of claim 11 wherein forming an indentation comprises forming

multiple indentations of multiple depths in the first layer.

15. (Original) The method of claim 1 wherein distorting comprises providing a convex

feature at the first layer.

16 (Original) The method of claim 15 wherein the convex feature extends from an outer

surface of the first layer.

17. (Original) The method of claim 15 wherein the convex feature is embedded within the

first layer.

- 3 -

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

18. (Original) The method of claim 15 further comprising encapsulating the convex feature with a second layer provided on the first layer and the convex feature.

19. (Original) The method of claim 15 wherein distorting further comprises forming an

indentation in an outer surface of the first layer, and wherein the convex feature is

provided within the indentation.

20. (Original) The method of claim 15 wherein distorting further comprises forming an

indentation in an outer surface of the first layer, and wherein the convex feature is

embedded within the first layer below the indentation.

21. (Original) The method of claim 15 wherein providing a convex feature comprises

forming multiple convex features of multiple thicknesses at the first layer.

22. (Original) The method of claim 15 wherein the convex features comprise voids formed in

the first layer.

23. (Original) The method of claim 1 wherein distorting comprises altering an outer surface

of the first layer in the region.

24. (Original) The method of claim 23 wherein altering comprises altering the texture of the

outer surface.

25. (Original) The method of claim 1 wherein distorting the region of the first layer is

conducted during manufacture of the optical medium.

26. (Original) The method of claim 1 wherein distorting the region of the first layer is

conducted following manufacture of the optical medium.

27. (Original) The method of claim 1 wherein distorting is conducted by a distorting

- 4 -

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

technique selected from the group of techniques consisting of: pressure, heat, chemical, electrical, friction, and drilling.

- 28. (Original) The method of claim 1 wherein the optical medium is a dual-sided medium having dual opposed data layers and first layers.
- 29. (Previously Presented) An optical medium having a modified optical path comprising: a first layer adjacent a data layer; and

a distorted region formed at the first layer prior to a reading operation of the medium such that a reading operation of data stored in the data layer corresponding to the distorted region is modified, the distorted region extending in a direction along a track of the data layer, the distorted region maintaining its optical characteristics following irradiation of the distorted region during the reading operation.

- 30. (Original) The optical medium of claim 29 wherein the first layer comprises a reading layer through which the optical path is directed.
- 31. (Previously Presented) The optical medium of claim 30 wherein the optical medium further comprises a back layer adjacent the data layer, opposite the reading layer.
- 32. (Original) The optical medium of claim 31 wherein a distorted region is further provided on the back layer.
- 33. (Original) The optical medium of claim 29 wherein the first layer comprises a back layer.
- 34. (Original) The optical medium of claim 33 further comprising a reading layer adjacent the data layer, the reading layer opposite the back layer.
- 35. (Original) The optical medium of claim 34 wherein a distorted region is further provided on the reading layer.

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

36. (Original) The optical medium of claim 29 wherein the distorted region is provided at a

predetermined location.

37. (Original) The optical medium of claim 29 wherein the distorted region is provided at a

location that is randomly generated.

38. (Original) The optical medium of claim 29 wherein the distorted region distorts the first

layer such that the optical path of incident light in the distorted region for reading the

corresponding data in the data layer is modified.

39. (Original) The optical medium of claim 29 wherein the distorted region comprises an

indentation in an outer surface of the first layer.

40. (Original) The optical medium of claim 39 further comprising a second encapsulation

layer on the first layer and the indentation.

41. (Original) The optical medium of claim 39 wherein the indentation comprises multiple

indentations of multiple depths in the first layer.

42. (Original) The optical medium of claim 29 wherein the distorted region comprises a

convex feature at the first layer.

43. (Original) The optical medium of claim 42 wherein the convex feature extends from an

outer surface of the first layer.

44. (Original) The optical medium of claim 42 wherein the convex feature is embedded

within the first layer.

45. (Original) The optical medium of claim 42 wherein the convex feature is encapsulated by

a second layer provided on the first layer and the convex feature.

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

46. (Original) The optical medium of claim 42 wherein the distorted region further comprises an indentation formed in an outer surface of the first layer, and wherein the convex feature is provided within the indentation.

- 47. (Original) The optical medium of claim 42 wherein the distorted region comprises an indentation formed in an outer surface of the first layer, and wherein the convex feature is embedded within the first layer below the indentation.
- 48. (Original) The optical medium of claim 42 wherein the convex feature comprises multiple convex features of multiple thicknesses at the first layer.
- 49. (Original) The optical medium of claim 42 wherein the convex features comprise voids formed in the first layer.
- 50. (Original) The optical medium of claim 29 wherein the distorted region comprises an alteration of an outer surface of the first layer in the region.
- 51. (Original) The optical medium of claim 50 wherein the alteration comprises an alteration in the texture of the outer surface.
- 52. (Original) The optical medium of claim 29 wherein the distorted region is formed during manufacture of the optical medium.
- 53. (Original) The optical medium of claim 29 wherein the distorted region is formed following manufacture of the optical medium.
- 54. (Original) The optical medium of claim 29 wherein the distorted region is formed by a distorting technique selected from the group of techniques consisting of: pressure, heat, chemical, electrical, friction, and drilling.

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

55. (Original) The optical medium of claim 29 wherein the optical medium is a dual-sided medium having dual opposed data layers and first layers.

56.-63. (Canceled)

64. (New) A method for modifying an optical path of an optical medium, the optical medium including a first layer adjacent a data layer comprising:

selecting a region of the first layer to be distorted; and

prior to a reading operation of the medium, distorting the region of the first layer such that a reading operation of data stored in the data layer corresponding to the distorted region is modified, the distorted region extending in a direction along a track of the data layer, the distorted region maintaining its optical characteristics following irradiation of the distorted region during the reading operation,

wherein distorting comprises forming an indentation in an outer surface of the first layer.

- 65. (New) The method of claim 64 further comprising encapsulating the indentation.
- 66. (New) The method of claim 65 wherein encapsulating comprises providing a second layer on the first layer and the indentation.
- 67. (New) The method of claim 64 wherein forming an indentation comprises forming multiple indentations of multiple depths in the first layer.
- 68. (New) A method for modifying an optical path of an optical medium, the optical medium including a first layer adjacent a data layer comprising:

selecting a region of the first layer to be distorted; and

prior to a reading operation of the medium, distorting the region of the first layer such that a reading operation of data stored in the data layer corresponding to the

Application Serial No.: 10/023,424

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

distorted region is modified, the distorted region extending in a direction along a track of

the data layer, the distorted region maintaining its optical characteristics following

irradiation of the distorted region during the reading operation,

wherein distorting comprises providing a convex feature at the first layer.

69. (New) The method of claim 68 wherein the convex feature extends from an outer surface

of the first layer.

70. (New) The method of claim 68 wherein the convex feature is embedded within the first

layer.

71. (New) The method of claim 68 further comprising encapsulating the convex feature with

a second layer provided on the first layer and the convex feature.

72. (New) The method of claim 68 wherein distorting further comprises forming an

indentation in an outer surface of the first layer, and wherein the convex feature is

provided within the indentation.

73. (New) The method of claim 68 wherein distorting further comprises forming an

indentation in an outer surface of the first layer, and wherein the convex feature is

embedded within the first layer below the indentation.

74. (New) The method of claim 68 wherein providing a convex feature comprises forming

multiple convex features of multiple thicknesses at the first layer.

75. (New) The method of claim 68 wherein the convex features comprise voids formed in the

first layer.

76. (New) An optical medium having a modified optical path comprising:

- 9 -

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

a first layer adjacent a data layer; and

a distorted region formed at the first layer prior to a reading operation of the medium such that a reading operation of data stored in the data layer corresponding to the distorted region is modified, the distorted region extending in a direction along a track of the data layer, the distorted region maintaining its optical characteristics following irradiation of the distorted region during the reading operation,

wherein the distorted region comprises an indentation in an outer surface of the first layer.

- 77. (New) The optical medium of claim 76 further comprising a second encapsulation layer on the first layer and the indentation.
- 78. (New) The optical medium of claim 76 wherein the indentation comprises multiple indentations of multiple depths in the first layer.
- 79. (New) An optical medium having a modified optical path comprising:
 - a first layer adjacent a data layer; and

a distorted region formed at the first layer prior to a reading operation of the medium such that a reading operation of data stored in the data layer corresponding to the distorted region is modified, the distorted region extending in a direction along a track of the data layer, the distorted region maintaining its optical characteristics following irradiation of the distorted region during the reading operation,

wherein the distorted region comprises a convex feature at the first layer.

- 80. (New) The optical medium of claim 79 wherein the convex feature extends from an outer surface of the first layer.
- 81. (New) The optical medium of claim 79 wherein the convex feature is embedded within

Application Serial No.: 10/023,424

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

the first layer.

82. (New) The optical medium of claim 79 wherein the convex feature is encapsulated by a

second layer provided on the first layer and the convex feature.

83. (New) The optical medium of claim 79 wherein the distorted region further comprises an

indentation formed in an outer surface of the first layer, and wherein the convex feature is

provided within the indentation.

(New) The optical medium of claim 79 wherein the distorted region comprises an 84.

indentation formed in an outer surface of the first layer, and wherein the convex feature is

embedded within the first layer below the indentation.

85. (New) The optical medium of claim 79 wherein the convex feature comprises multiple

convex features of multiple thicknesses at the first layer.

86. (New) The optical medium of claim 79 wherein the convex features comprise voids

formed in the first layer.

87. (New) A method for modifying an optical path of an optical medium, the optical medium

including a first layer adjacent a data layer comprising:

selecting a region of the first layer to be distorted; and

prior to a reading operation of the medium, distorting the region of the first layer

by applying a permanent physical distortion to the medium in the first layer, to provide a

distorted region in the first layer that modifies the optical path of the medium, such that a

reading operation of data stored in the data layer corresponding to the distorted region is

modified, the distorted region extending in a direction along a track of the data layer, the

distorted region having permanent optical characteristics as a result of the physical

distortions that are maintained following irradiation of the distorted region during the

reading operation.

- 11 -

Reply to the Office Action of: March 1, 2006

Amendment Dated: August 31, 2006

88. (New) An optical medium having a modified optical path comprising:

a first layer adjacent a data layer; and

a distorted region formed at the first layer prior to a reading operation of the medium by applying a permanent physical distortion to the medium in the first layer, to provide a distorted region in the first layer that modifies the optical path of the medium such that a reading operation of data stored in the data layer corresponding to the distorted region is modified, the distorted region extending in a direction along a track of the data layer, the distorted region having permanent optical characteristics as a result of the physical distortion that are maintained following irradiation of the distorted region during the reading operation.